

Title (en)
POSITIONING BASED ON SIGNAL PROPAGATION TIME DIFFERENCE

Title (de)
POSITIONIERUNG AUF BASIS DER SIGNALAUSBREITUNGSZEITDIFFERENZ

Title (fr)
POSITIONNEMENT BASÉ SUR UNE DIFFÉRENCE DE TEMPS DE PROPAGATION DE SIGNAL

Publication
EP 3911967 A4 20221019 (EN)

Application
EP 20742013 A 20200116

Priority
• FI 20195031 A 20190118
• FI 2020050026 W 20200116

Abstract (en)
[origin: WO2020148485A1] According to one aspect, the positioning method, as well as the system of base stations (T1,T2,T3) and detector (I) is based on measuring the propagation time difference of externally controlled electromagnetic pulses (F1,F2,F3) and the arrival signals of the controlled base station during a measurement cycle (t1+t2). In one embodiment, a reference clock is not required for measuring propagation time differences, but instead, accurate fixed distances between base stations can be used as a reference. System calibration is rarely performed. It checks the mutual locations of base stations. This may be partially automated. The positioning system does not require any sensors.

IPC 8 full level
G01S 1/24 (2006.01); **G01S 5/10** (2006.01)

CPC (source: EP FI US)
G01S 1/24 (2013.01 - EP FI); **G01S 5/0081** (2013.01 - US); **G01S 5/02216** (2020.05 - US); **G01S 5/06** (2013.01 - FI US);
G01S 5/10 (2013.01 - FI US); **G01S 5/10** (2013.01 - EP)

Citation (search report)
• No further relevant documents disclosed
• See references of WO 2020148485A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2020148485 A1 20200723; CN 113302508 A 20210824; EP 3911967 A1 20211124; EP 3911967 A4 20221019; FI 20195031 A1 20200719; JP 2022518691 A 20220316; JP 7498718 B2 20240612; US 11768269 B2 20230926; US 2022171015 A1 20220602

DOCDB simple family (application)
FI 2020050026 W 20200116; CN 202080009815 A 20200116; EP 20742013 A 20200116; FI 20195031 A 20190118; JP 2021540542 A 20200116; US 202017423574 A 20200116